

| No. Cases | Occupation | Duration (years) | Med. } INVOLUT. | Advan. | Appetite | Nourishment | Mucous Membranes | Temp. (4 P.M.) | Cough | Sputum | Complications | Prognosis | Klin O4 | Diazo | Live | Dead |
|-----------|------------|------------------|-----------------|--------|----------|-------------|------------------|----------------|-------|--------|---------------|------------------|---------|-------|------|------|
| 86 | Laborer | 2/3 | # | # | 0 | Poor | Pale | 99 | # | # | Larynx | Unfavorable | # | # | # | |
| 87 | Cook | 2 | # | # | 0 | .. | .. | 101 | # | # | 0 | .. | # | # | # | |
| 88 | Laborer | 3/4 | # | # | 0 | .. | .. | 102 | # | 0 | 0 | .. | # | # | # | |
| 89 | " | 3 | # | # | 0 | .. | .. | 98 | # | 0 | 0 | .. | # | # | # | |
| 90 | " | 1 | # | # | 0 | .. | .. | 97 | # | 0 | 0 | Bronchial Asthma | # | 0 | # | |
| 91 | Waiter | 1/2 | # | # | 0 | .. | Fair | 92-2 | 0 | 0 | 0 | .. | 0 | 0 | # | |
| 92 | Laborer | 1 1/2 | # | # | 0 | .. | Pale | 97-6 | # | # | 0 | .. | 0 | 0 | # | |
| 93 | " | 1/2 | # | # | 0 | .. | .. | 98-8 | 0 | 0 | 0 | .. | 0 | 0 | # | |
| 94 | " | 4 | # | # | 0 | Fair | Fair | 99 | # | # | Larynx | .. | 0 | 0 | # | |
| 95 | " | 2 | # | # | 0 | Poor | Pale | 99-6 | # | # | 0 | .. | 0 | 0 | # | |
| 96 | Cook | 1 1/2 | # | # | 0 | .. | .. | 98-4 | # | 0 | 0 | .. | 0 | 0 | # | |
| 97 | Laborer | 1 | # | # | 0 | .. | .. | 97-4 | # | 0 | 0 | Peritonitis | .. | 0 | # | |
| 98 | " | 1/2 | # | # | 0 | .. | Fair | 98 | # | 0 | 0 | .. | 0 | 0 | # | |
| 99 | " | 5/4 | # | # | 0 | .. | .. | 99-2 | 0 | # | 0 | .. | 0 | 0 | # | |
| 100 | " | 2 | # | # | 0 | .. | Pale | 97-4 | # | # | Nephritis | .. | 0 | 0 | # | |

clinically considered "favorable" a positive diazo reaction was obtained. In 39 of 86 (45%) clinically unfavorable cases the urochromogen test was positive while in 53 (61%) the diazo test was positive. Seventeen of 100 patients died in six months. Of these 17, 11 (65%) showed a positive urochromogen, and 13 (76%) a positive diazo while 10 (59%) showed both. Of 17 patients showing a positive urochromogen test with a negative diazo (a combination considered especially ill-omened by Weiss) none have died to date. Of 39 patients having a negative urochromogen and a positive diazo, five have died. The results are more compactly shown in the accompanying table.

CONCLUSIONS.

(1) The urochromogen and diazo reactions appear in the urine of a majority of patients in a late stage of pulmonary tuberculosis.

(2) They do not appear until long after a correctly unfavorable prognosis is possible by a careful clinical examination.

References.

1. Weiss Journ. Am. Med. Ass'n., Nov. 22, 1913, p. 1943.
2. Hefebower. Am. Journ. Med. Sc., 1912, p. 221.
3. Schaffle. Journ. Am. Med. Ass'n., Oct. 10, 1914, p. 1294.

CONTRIBUTION TO INFECTION; ITS PREVENTION AND TREATMENT. RESULTS IN 500 TRAUMATIC CASES.

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To prevent and cure infection, its habits should be observed, recorded and studied. In studying the records of my last 500 traumatic cases I observed that the first habit of infection was to cause tenderness and congestion.

In some of the leading text-books on surgery the term inflammation is used almost synonymously at times with infection. There is a fine distinction between the two. As a general rule both are caused by protein substances. In infection, however, there is the presence of prosperously growing microorganisms at the site of the lesion, but in inflammation there may or may not be microorganisms present in the lesion. Inflammation frequent-

ly follows where tissues have had their resistance lowered by fatigue, trauma or chemical action.

For example, there were 50 cases of joint injury without open wounds. There was no case of infection, although some of the patients who had neglected their sprains and contusions of joints developed refractory inflammation. Also in eight cases of new work myositis and tenosynovitis of the forearm from fatigue, there was no case of infection.

In 400¹ cases of open wounds it was found to be a simple matter to prevent infection when the patient was given treatment early. Early means within six hours for lacerated wounds and within three hours for puncture wounds. Twenty-eight per cent. of the 400 cases showed evidences of infection when they first came under treatment. Of the remaining 284, primary infection developed in less than one per cent. Less than one per cent. developed secondary infection following the patient's interference with the dressing or wound, such as the removing of the stitches by himself.

Although iodine is the best universal preventive of infection in wounds, I have found that it delays healing somewhat, that its effect is too transitory and that it causes extreme sensory nerve stimulation. Compared with certain silver preparations, in cases of equal magnitude, for instance, when fresh 50 per cent. argyrol was applied at the time of first aid, the results were much in favor of the latter preparation. With argyrol the period of treatment was 30 per cent. less than with iodine; the application was painless and the argyrol remained at the site of the wound for about 24 hours.

If wounds contain foreign material they should be treated as if infected from the start.

In 75 cases of puncture wound 23 per cent. were already infected when first coming under treatment. First treatment had been delayed for an average period of five days. In order to prevent infection it was necessary to inject tincture of iodine under pressure. This was accomplished

with an all glass syringe using the ordinary hypodermic needle, but with the shaft removed, giving a blunt point which could be pushed firmly into the opening of the wound. Infection developed in one of these cases where injection was neglected and the wound swabbed with iodine. In puncture wounds from stepping on a nail, healing took more than twice as long when 95 per cent. carbolic acid was used as it did when iodine was introduced into the wound.

Of three cases of wounds coming to me, having been treated elsewhere with bichloride of mercury, all were infected. The bichloride delayed recovery. The trauma from too tight stitches favored infection in one of these cases.

To prevent infection in cases of compound fracture of the jaw and lacerations of the mouth, rinsing the mouth every 15 minutes with boric acid solution proved effectual.

TREATMENT OF INFECTED WOUNDS.

As soon as congestion appears a fight is begun. It is then a matter of the enemy's ability to become entrenched.

Aside from specific and constitutional treatment, boric acid solution, so highly recommended by Flexner,² has proven efficacious in most cases of acute infection, but where it failed it was because the disease was not one to be cured by phagocytosis like staphylococcus infections, but by bacteriolysis as in streptococcus infections, in which case methods were used which temporarily ignored the phagocytes. Chemicals were resorted to which not only inhibited the growth of bacteria but changed their physical status the better to fit them for attack by the body substances. This was done by using wet dressings of alcohol alternating with several applications of hot boric acid solution, preferably immersing the part.

In acute infections in order to give the body more time to obtain ammunition, winter is brought about to delay all local fighting. This is done by the application of ice for one hour outside the dressing. Winter then has prevented the enemy from developing its fighting strength. After this, summer is brought about by the application of heat for one hour, thereby starting the war again, but this time to the advantage of the host, for while all the enemy's operations have been halted by winter, the host has been replenishing all of his materials for warfare at a distant and more agreeable climate. A few seasons of this will win the contest and give the host supremacy.

I have observed benefit also from giving five grains of aspirin three times a day in some of these infections.

Little can be added to the present operative methods of curing infection. Where it is possible in acute cases requiring incision, it is advisable to have one incision transverse to the channels of absorption. In chronic cases excision, when possible, is excellent. One case of skin infection, with the micrococcus catarrhalis that had been growing worse for seven weeks, was thus cured in 17 days.

References.

1. For clearness round numbers are used where the error is under one per cent.
2. Flexner: Infections, Journal A. M. A., 1913, lxi, 1876.

THE SCOPE AND LIMITATIONS OF A PSYCHIATRIC CLINIC IN SAN FRANCISCO.

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"Who would not give a trifle to prevent
What he would give ten thousand worlds to cure."

—De Young.

Of no disease can this be more truly said than insanity. The task of the general practitioner or surgeon who must acquaint the friends and relatives of his patient with the fact that death is inevitable is pleasant compared with that of the psychiatrist who must pronounce for his patient a "living death." The United States is at the present time spending more than thirty-three million dollars yearly for the cure and care of patients afflicted with mental disease, and comparatively nothing for prevention. And yet the perusal of the report of almost any state hospital will show that in about fifty per cent. of the cases admitted the mental disorder is due directly to definite causes which are clearly preventable. From five to ten per cent. more are functional disorders which probably could have been prevented by early treatment.

The neglect of the subject of the prevention of mental disease is due largely to the fact that instruction in psychiatry in the average medical school is still hopelessly inadequate. Consequently the general practitioner is entirely unacquainted with the early manifestations of mental disease, and if he does recognize them, is at a loss how to deal with them. The statistics of the admissions to institutions for the insane from Greater New York taken for one year recently showed that one-third of the cases had been insane for more than a year prior to admission. These facts would indicate that for the psychiatric clinic there is a wide field of usefulness. This has been proven in Boston, New York and Baltimore, where such clinics have been established sufficiently long to demonstrate their importance.

In August, 1914, the after-care work for the four northern state hospitals of California was established and a limited amount of time was given to the examination of new cases. Although no effort was made to advertise the fact that such a clinic was being conducted, one hundred cases have been presented for mental examination and advice during the past ten months. These patients were referred to the clinic by general practitioners, social workers and after-care patients. Two came from the city prison. The majority of the cases were referred by other clinics at the University Hospital to the nerve clinic, where neurological, and if indicated, serological and cytological examinations were made.

The cases examined were, with a few exceptions, very early cases. Some of them had been treated by many hospitals without having their mental disorder even suspected. One man who was very insane had been treated in four different hospitals.